

Before the
FEDERAL COMMUNICATIONS COMMISSION
 Washington, D.C. 20554

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In the Matter of

Promoting Efficient Use of Spectrum
 Through Elimination of Barriers to the
 Development of Secondary Markets

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WT Docket No. 00-230

FEDERAL COMMUNICATIONS COMMISSION
 OFFICE OF THE SECRETARY

Reply Comments of the Industrial Telecommunications Association, Inc.

The Industrial Telecommunications Association, Inc. (ITA) hereby respectfully submits its reply comments in response to the Commission's *Further Notice of Proposed Rulemaking* (Notice) in the above-referenced matter.¹ The Notice solicits comments on what additional steps should be taken to facilitate an efficient secondary markets model that will allow greater access to under-utilized spectrum.² Comments are further sought on expanding the pool of services that are eligible to enter into spectrum lease agreements.³ As discussed below, ITA applauds the Commission's efforts to increase access to spectrum, but remains unconvinced that these actions, standing alone, would solve the extensive spectrum congestion problems for mission-critical,⁴ traditional voice communications currently faced by private land mobile licensees. Furthermore, while ITA supports spectrum-leasing opportunities for all exclusive-use Private Land Mobile Radio (PLMR) licensees, it fails to see the benefit of spectrum leasing among shared licensees.

¹ See Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary, *Further Notice of Proposed Rulemaking*, WT Docket No. 00-230, October 6, 2003 (Order/Notice)

² See generally Order/Notice

³ See generally Order/Notice

⁴ "Mission-critical" will be used throughout this pleading just as some consider traditional private land mobile operations as "critical infrastructure" operations. In fact, during the Wireless Telecommunications Bureau's (WTB) recent reorganization, private land mobile radio regulation, including "mission-critical" operations, was rolled into the Public Safety and Critical Infrastructure Division of the WTB



I. Statement of Interest

ITA is a Commission-certified frequency advisory committee coordinating in excess of 13,000 applications per year on behalf of applicants seeking Commission authority to operate on a wide-variety of frequency assignments allocated between 30-900 MHz.

ITA enjoys the support of a membership including more than 2,100 licensed two-way land mobile radio communications users, private mobile radio service (PMRS) oriented radio dealer organizations, and the following trade associations:

Alliance of Motion Picture and Television Producers

Aeronautical Radio, Inc.

National Propane Gas Association

In addition, ITA is affiliated with the following independent market councils: the Council of Independent Communications Suppliers (CICS), the Taxicab & Livery Communications Council (TLCC), the Telephone Maintenance Frequency Advisory Committee (TELFAC), and USMSS, Inc.

ITA's extensive involvement with the private land mobile industry expands into many services including application preparation for public safety and first responders; coordination and engineering services for industrial/business users, commercial licensees under Part 90 of the Commission's rules, and PMRS radio dealers; protection of petroleum service users through a contractual agreement with the American Petroleum Institute; an industry liaison for equipment manufacturers and end users, as well as band managers and end users; the Commission's first line of post-licensing, interference resolution; and various other services.

II. Background

On November 9, 2000, the Commission adopted a *Policy Statement*, explaining its proposal to develop private, secondary markets that would facilitate redistribution of spectrum to parties who valued the spectrum the most and/or could use it more efficiently.⁵ On November 27, 2000, the Commission released a *Notice of Proposed Rulemaking* (NPRM) in the instant proceeding, outlining suggested principles for promoting the efficient use of spectrum through the development of secondary markets.⁶ In response to the NPRM, ITA stated its support for a band manager approach to secondary markets, as well as noting the public interest benefits from authorizing flexible service rules.⁷ On October 6, 2003, the Commission released a *Report and Order* (Order) mandating rules for spectrum leasing options available to designated radio services and a *Further Notice of Proposed Rulemaking* seeking comments on expanding these rules to other services.⁸

III. Discussion

ITA commends the Commission on its efforts to increase access to spectrum by allowing exclusive-use licensees the added flexibility to lease under-utilized spectrum. The land mobile community is cognizant of the need for additional spectrum access given that many of its operations are found on congested, shared channels and the availability of usable spectrum, especially in highly populated areas, is limited. While secondary markets are not an adequate substitute for additional land mobile allocations supporting critical communications

⁵ See Principles for Promoting the Efficient Use of Spectrum by Encouraging the Development of Secondary Markets, *Policy Statement*, FCC 00-401 (rel. December 1, 2000).

⁶ See Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, *Notice of Proposed Rulemaking*, WT Docket No. 00-230 (rel. Nov. 27, 2000).

⁷ See generally Reply Comments of the Industrial Telecommunications Association, Inc. submitted March 9, 2001 (Reply).

⁸ Order/Notice

requirements, they could provide some relief to land mobile licensees seeking additional spectrum. Furthermore, exclusive-use licensees found in the land mobile community recognize and appreciate the potential business opportunities this proceeding could provide. ITA, nevertheless, urges the Commission to take into account the importance of interference-free operations and the need for Commission enforcement surrounding communications for mission-critical, land mobile operations when issuing a second Order on this item.

A. Secondary Markets Created Under the *Report and Order* Promote Efficient Operations, But Should Not Be Viewed as a Spectrum Management Tool That Could Alleviate Severe Spectrum Shortages in the Private Land Mobile Radio Services

Through the release of this Order the Commission has given the industry a strong basis on which to build secondary spectrum markets. Many licensees with excess spectrum and an exclusive authorization now have the ability to choose a leasing design, in conjunction with their daily operations, that will accommodate their communications needs. One of the leasing options, whether long-term or short-term, would allow the licensee to relinquish *de facto* control over the license, while the “spectrum manager” leasing option would require the licensee to maintain both *de jure* and *de facto* control of the spectrum.⁹

The introduction of secondary markets, as a means of accessing spectrum, will benefit both licensees and entities seeking usable spectrum. Licensees, armed with the ability to reap added profits from under-utilized spectrum, will place a greater focus on their own operations by operating at the maximum efficiency level on the minimal amount of spectrum. As a result, excess capacity could provide a new business opportunity for the licensee while enhancing spectral efficiency by placing second or third parties on excess channels. Secondary market lease transactions would also allow spectrum-seekers to secure a lease that will appropriately

⁹ Order/Notice at ¶ 12-13

meet their specific spectrum usage requirements. In short, spectral efficiency advances with additional use of under-utilized spectrum, while permitting the spectrum-seeker to provide itself or others with valuable spectrum based services.

ITA appreciates the notion that the instant proceeding will increase access to spectrum, but this concept should not be viewed as the only answer to spectrum shortages found in the PLMR services. In the top 50 markets today, it is not possible to find “clear,” or unencumbered, spectrum in the 150-174 MHz, 450-470 MHz, 800 MHz or 900 MHz bands – often regarded as the “workhorse” bands for traditional, critical infrastructure operations. While the Commission has recently allocated additional spectrum, such as 50 MHz at 4.9GHz and unlicensed spectrum, for ancillary services, these bands cannot be used for core, reliable and secure, mission-critical voice services demanded by America’s business and industrial sector. As such, our private land mobile spectrum shortage for mission-critical services remains. In fact, since 1999, only 14 MHz of private land mobile spectrum has been allocated, and is considered suitable, to relieve a portion of the congestion for mission-critical, voice usage – 6 MHz of Guard Band spectrum and 8 MHz in the 1.4 GHz band.¹⁰

ITA, as of today, is unaware if all guard band winners are currently leasing out or using these critical blocks of spectrum. To our knowledge, only one auction winner, Access Spectrum, has commenced leasing spectrum on its 1 by 1 MHz block. Unfortunately, this leaves over 4 MHz of usable spectrum lying fallow today.

⁹ See Service Rules for the 764-746 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission’s Rules, *Second Report and Order*, (rel. March 9, 2000) See also Reallocation of the 216-220 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz Government Transfer Band; and Amendment of Part 2 and 95 of the Commission’s Rules to Create a Wireless Medical Telemetry Service, and Amendment to Part 90 of the Commission’s Rules Concerning Private Land Mobile Radio Services *Report and Order and Memorandum Opinion and Order*, (rel. Jan. 2, 2002) (14 R&O)

In its 1999 Policy Statement, the Commission acknowledged the need for additional private land mobile spectrum.¹¹ In response, the Commission allocated 8 MHz of unpaired spectrum for private land mobile radio use at 1.4 GHz – 2 MHz at 1390-1392 MHz and a paired 3 by 3 MHz block at 1392-1395/1432-1435 MHz.¹² This allocation, however, has not been as successful as the Commission may have anticipated. The Land Mobile Communications Service in the 1.4 GHz band has not been successful at meeting PLMR user's needs for a variety of reasons, including the yet-to-be scheduled auction and a lack of equipment availability. Obviously, without the auctioning and licensing of this spectrum and equipment that is readily available, no one can operate in these bands

Nevertheless, many private land mobile licensees have limited financial resources and cannot assume the risks involved in the auction process when competing with commercial entities, inhibiting many land mobile licensees from venturing to the 1.4 GHz band. Land mobile operators use their spectrum for daily business operations, and as such do not profit directly from the spectrum used, but instead use spectrum to support the business activity to which they are engaged. Unfortunately, since radio is an ancillary, yet critical, part of business success, these PLMR licensees cannot afford to bid as high for the spectrum as commercial operators who derive profit directly from its use. ITA appreciates steps the Commission has taken in addressing spectrum shortages through different avenues, but the spectrum made available to date has not benefited the overwhelming majority of private wireless users, as at least 12 MHz of the 14 MHz recently allocated remained unused.

¹¹ See Principles for Reallocation of Spectrum to Encourage the Development of Telecommunications Technologies for the New Millennium, *Policy Statement*, (rel Nov 22, 1999) at ¶ 24

¹² 1.4 R&O

As the record reflects, ITA has been supportive of the secondary markets model, but has urged the Commission to proceed with caution in PLMR bands.¹³ With leasing, and thus additional spectrum use, further congestion in these bands may proliferate. This multiplied congestion will only perpetuate the need for an additional PLMR spectrum allocation, especially in more densely populated markets.

B. While Secondary Markets Opportunities Should be Extended to Exclusive-Use Licensees in Primarily Shared Services,¹⁴ They May be Unnecessary for Shared Licensees Given that the Primary Market, the Commission, is Open for Business

Shared, licensed services are an efficient way in which to operate on spectrum. In such a licensing design, unused spectrum can be coordinated and used by eligible entities by simply applying for a license through the Commission. Any eligible entity may apply for a license to share spectrum with geographic neighbors. Since spectrum-seekers of shared services have access to spectrum by way of the Commission, there does not seem to be a need for secondary markets, with the exception of those licensees that have gained exclusivity in shared services.

1. Shared, Non-Exclusive (Conventional) Licensees in Primarily Shared Services Have No Incentive to Lease Spectrum or Acquire Leased Spectrum

A majority of PLMR licenses are conventional, non-exclusive licenses operating in a shared, coordinated environment, where frequency coordinators choose operating frequencies based on the co-channel and adjacent channel incumbents in the spectral and physical environment.¹⁵ Conventional licensees in rural areas seldom have difficulties in accessing shared Part 90 PLMR spectrum below 470 MHz; the impediment however, abounds in the disparity

¹³ See generally Reply.

¹⁴ As will be noted below, some licensees in PLMR shared services (Part 90, below 470 MHz) have obtained exclusivity, making them exclusive licensees in a primarily shared service

¹⁵ See 47 C F R § 90.7 “Conventional radio system A method of operation in which one or more radio frequency channels are assigned to mobile and base stations but are not employed as a trunked group”

between the sheer volume of PLMR spectrum-seekers in more densely populated areas and the limited amount of PLMR channels.¹⁶ In these urban areas, many licensees can be operating on the same frequency, often with a few kilometers of each other. In this light, ITA believes that shared services, intrinsically by their design, forge efficient operations.

Moreover, ITA fails to see the benefit of lease arrangements in shared services when a spectrum-seeker could obtain its own license for the same spectrum through the FCC at a nominal fee, including FCC filing fees and frequency coordination. Given that the primary market, the Commission, remains open for business for shared channels, it seems that there is no incentive for an entity to lease shared spectrum or to engage in a lease for shared spectrum.

2. Exclusive-Use Licensees in Primarily Shared Services Should be Permitted to Lease Spectrum with the Same Guidelines as Those Part 90 Eligibles Under the *Report and Order*.

As noted above, ITA supports the Commission's authorization of exclusive-use, Business and Industrial Land Transportation (B/ILT) licensees' spectrum leasing opportunities, but the authorization under the Order only pertains to certain B/ILT licensees – including “all B/ILT channels above 512 MHz and those in the 470-512 MHz band where a licensee has achieved exclusivity, but excluding those channels below 470.”¹⁷ ITA recommends that the Commission extend Part 90 leasing eligibility to private land mobile licensees with an FB8 station class code on channels below 470 MHz. These licensees are operating in shared services, but have obtained exclusivity through the frequency coordination process. To achieve exclusivity, an applicant must demonstrate that its interfering contour would not overlap the service area contour of an incumbent licensee. If an applicant can operate, as proposed, without such overlap, the licensee may be given an FB8 station class code, indicating a protected service area. An FB8 license

¹⁶ 47 C.F.R. § 90

¹⁷ Order/Notice at ¶ 84, footnote 181

would, from the point of licensure, exclude other applicants from obtaining an authorization to operate within the licensee's protected service area. Much like the 470-512 MHz range, to which the Commission extended leasing authority upon the condition of exclusivity, many licensees below 470 MHz have achieved exclusivity as FB8 licensees in a primarily shared service. Licensees below 470 MHz, however, have achieved this exclusivity through frequency coordination procedures instead of meeting loading requirements. In either case, the licensee has exclusive use of their channel in a given geographic area and should be permitted the same spectrum leasing opportunities.

Furthermore, the Commission sought comment on allowing public safety entities to lease excess spectrum¹⁸ ITA supports the concept of permitting public safety entities to enter into leasing arrangements with other Part 90, private land mobile entities. The reverse, authorizing I/B licensees to enter into leasing arrangements with public safety entities, should also be permitted, since both public safety and private wireless licensees have been operating as spectral neighbors with few problems, if any. However, as noted below, enforcement is an important aspect of spectrum management, especially in public safety and critical infrastructure services. If the Commission would decide to allow leasing in either of these two PLMR services, the enforcement of violations would be crucial to the success and integrity of the mission-critical services provided below 470 MHz

In supporting leasing opportunities for these licensees, ITA specifically urges the Commission to retain the rules adopted in the Order pertaining to use restrictions for "spectrum management" and long-term *de facto* transfer leasing.¹⁹ Under such regulation, a licensee

¹⁸ Order/Notice at ¶ 292.

¹⁹ Order/Notice at ¶ 112, "To the extent that licensees in private services are restricted from deploying commercial services on their spectrum, we also restrict lessees from using the spectrum for commercial services" and at ¶ 144.

authorized for private services would be restricted from leasing spectrum for commercial applications²⁰. Due to the critical nature of private land mobile operations, both critical infrastructure and public safety, and their need for interference-free operations, it would not be in the public interest to allow operations, other than authorized private land mobile operations on leased PLMR channels. ITA is confident that by only authorizing PLMR operations, whether public safety or critical infrastructure but not including commercial, to be leased on PLMR channels with exclusive-use licensees, the likelihood of cases of interference to mission-critical communications will be greatly reduced based on the similar nature of operations.

C. Secondary Market Agreements Should be Easily Accessible for Licensees and Frequency Coordinators, and Enforced by the Commission if Such Markets Could Pose Undue Harm to Mission-Critical Services

The availability of lease information to incumbent private land mobile licensees and frequency coordinators will be critical to the success of secondary markets, given the need for interference avoidance and interference resolution in these services. Private radio systems are used in every aspect of the American economy from operating petroleum pipelines to ensuring employee safety on construction sites. It is in situations such as these that no substitutes for private radio systems exist, and interference-free operations are essential for many of the mission-critical tasks that land mobile licensees perform on a daily basis. Due to the critical nature of many PLMR operations, including employee and the public's safety, licensees must remain aware of other operations in the spectral and geographic vicinity, since either could adversely affect existing mission-critical operations. Furthermore, for frequency coordinators to provide applicants with the best possible frequency selection, they require adequate, up-to-date information about the operating environment. Thus, frequency coordinators and land mobile

²⁰ Order/Notice at ¶ 112

licensees need access to information regarding the operations of lessees that are located in the same geographic area, as well as lessees that are located in the same spectrum range.

The ability to access the appropriate information in a timely-manner is just as important as its availability. The Universal Licensing Service (ULS), which has shown to be an effective and efficient tool for licensees and frequency coordinators to access and share information on a daily basis could also be used for facilitating secondary markets. An additional section on the ULS website including the spectrum-use lease terms that are arranged with exclusive-use licensees may prove to be a useful information source for unfettered access to those agreements.

Above and beyond information accessibility, ITA urges the Commission to remain cognizant that enforcement of its regulations, especially with regard to cases of interference and holding lessees accountable for the licensee's eligibility and use restrictions, will be paramount to the development and success of secondary markets. The Spectrum Policy Task Force suggests, "for the Commission to be able to meet the increasing complex spectrum management demands...the Commission must devote sufficient resources to monitoring spectrum use and enforcing the spectrum management rules."²¹ ITA agrees; in a new spectrum management paradigm, such as secondary markets, enforcement from the Commission is imperative in the PLMR services, especially with *de facto* transfer lease options that could create a disconnect between the Commission and the actual operating entity.²² In short, ITA does not believe that the success of secondary markets should come at the expense of interference to existing licensees.

IV. Conclusion

The Commission, in the Report and Order, has crafted a strong foundation on which secondary markets could be cultivated. Since there is a growing demand for traditional land

²¹ See Spectrum Policy Task Force, *Report*, ET Docket No. 02-135, (rel. Nov. 15, 2002) at p. 23.

²² Order/Notice at ¶ 12.

mobile spectrum, ITA looks enthusiastically to the future of additional spectrum access opportunities for the PLMR community. Even though this proceeding will not fulfill the vast spectrum needs of the PLMR community, ITA supports the Commission in authorizing exclusive-use licensees to engage in secondary markets, while questioning whether secondary markets in shared services are necessary. Furthermore, ITA is confident that the Commission will realize the importance of interference-free operations in these bands and will provide the necessary enforcement measures in order to create successful secondary markets in PLMR services.

Respectfully submitted,

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